Nuclear Heritage

No. 3. Advanced Test Reactor — the largest test reactor in the world, is used to study the effects of radiation on materials and also produces rare and valuable medical and industrial isotopes.

Idaho National Engineering and Environmental Laboratory

INEEL
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INEEL's 52 reactors

INEEL designed and constructed 52 reactors since its establishment in 1949 as the National Reactor Testing Station. For many years it was the site of the largest concentration of nuclear reactors in the world. After the first reactor at the National Reactor Testing Station (Experimental Breeder Reactor-I) went critical in 1951, scientists built and operated dozens more reactors in the next five decades. The alphabetical listing of the Idaho reactors below is from "Proving the Principle," A History of the Idaho National Engineering and Environmental Laboratory 1949-1999."

1. Advanced Reactivity Measurement Facility No. 1. (10/60 - 1974)
2. Advanced Reactivity Measurement Facility No. 2. (12/62 - 1968)
3. Advanced Test Reactor (7/67 - present)
4. Advanced Test Reactor Critical Facility (5/64 - present)
5. Argonne Fast Source Reactor (10/59 - late 1970s)
6. Boiling Water Reactor Experiment No. 1 (1953-7/54)
7. Boiling Water Reactor Experiment No. 2 (10/54 - 3/55)
8. Boiling Water Reactor Experiment No. 3 (6/55 - 1956)
9. Boiling Water Reactor Experiment No. 4 (12/56 - 6/58)
10. Boiling Water Reactor Experiment No. 5 (2/62 - 9/64)
11. Cavity Reactor Critical Experiment (5/67 - early 1970s)

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For More Information

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The INEEL is a U.S. Department of Energy national laboratory operated by Bechtel BWXT Idaho, LLC.

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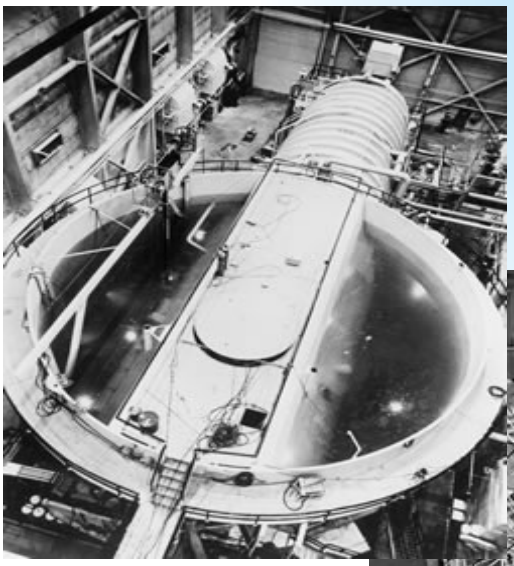
12. Coupled Fast Reactivity Measurement Facility (1968 - 1991)
13. Critical Experiment Tank (1958 - 1962)
14. Engineering Test Reactor (9/57 - 12/81)
15. Engineering Test Reactor Critical Facility (5/57 - 1982)
16. Experimental Beryllium Oxide Reactor (never operated)
17. Experimental Breeder Reactor No. 1 (8/51 - 12/63)
18. Experimental Breeder Reactor No. 2 (9/61 - 9/94)
19. Experimental Organic Cooled Reactor (never operated)
20. Fast Spectrum Refractory Metals Reactor (3/62 - 1968)
21. Gas Cooled Reactor Experiment (2/60 - 4/61)
22. Heat Transfer Experiment No. 1 (11/55 - 1956)
23. Heat Transfer Experiment No. 2 (7/57 - 3/61)
24. Heat Transfer Experiment No. 3 (1958 - 12/60)
25. High Temperature Marine Propulsion Reactor (1952 - 1964)
26. Hot Critical Experiment (1958 - 3/61)
27. Large Ship Reactor A (10/58 - 1/94)
28. Large Ship Reactor B (7/59 - 1987)
29. Loss of Fluid Test Reactor (1973 - 7/85)
30. Materials Testing Reactor (3/52 - 4/70)
31. Mobile Low-Power Reactor No. 1 (3/61 - 5/64)
32. Natural Circulation Reactor (9/65 - 5/95)
33. Neutron Radiography Facility (continuing)
34. Nuclear Effects Reactor (8/68 - 6/70)
35. Organic Moderated Reactor Experiment (9/57 - 4/63)
36. Power Burst Facility (9/72 - 1985)
37. Reactivity Measurement Facility (2/54 - 4/62)
38. Shield Test Pool Facility (early 1960s)
39. Special Power Excursion Reactor Test No. I (6/55 - 1964)
40. Special Power Excursion Reactor Test No. II (3/60 - 10/64)
41. Special Power Excursion Reactor Test No. III (12/58 - 6/68)
42. Special Power Excursion Reactor Test No. IV (7/62 - 8/70)
43. Spherical Cavity Reactor Critical Experiment (11/72 - 1973)
44. Stationary Low-Power Reactor (8/58 - 1/61)
45. Submarine Thermal Reactor (3/53 - 10/89)
46. Systems for Nuclear Auxiliary Power (SNAP) 10A Transient No. 1 (early 1960s)
47. Systems for Nuclear Auxiliary Power (SNAP) 10A Transient No. 3 (4/64 - 4/64)
48. Systems for Nuclear Auxiliary Power (SNAP) 10A Transient No. 2 (1965 - 1/66)
49. Thermal Reactor Idaho Test Station (last operated in 1964)
50. Transient Reactor Test Facility (2/59 - 4/94)
51. Zero Power Physics Reactor (4/69 - 4/92)
52. Zero Power Reactor No. 3 (10/55 - 11/70)

* Includes reactors built/operated by Argonne National Laboratory-West

No. 30. The Materials Testing Reactor — (1952-1970) was the second reactor built at the National Reactor Testing Station, now the INEEL, used to test materials' performance in intense radiation environments. Every reactor designed in the United States has been influenced by the knowledge gained from the MTR.



No. 45. Submarine Thermal Reactor — the submarine thermal reactor was the prototype power plant for the nation's first nuclear submarine, the USS Nautilus.

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